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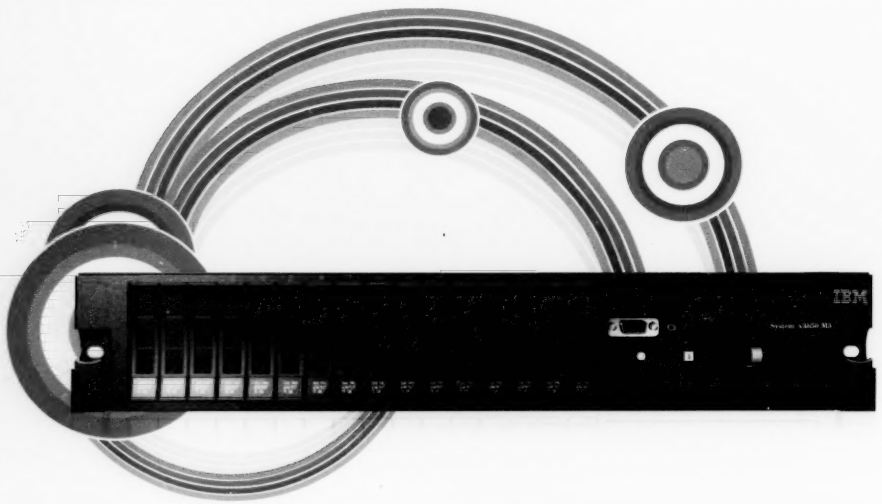

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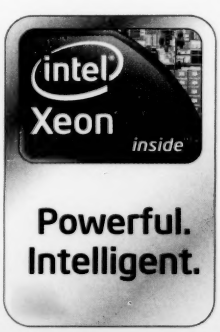

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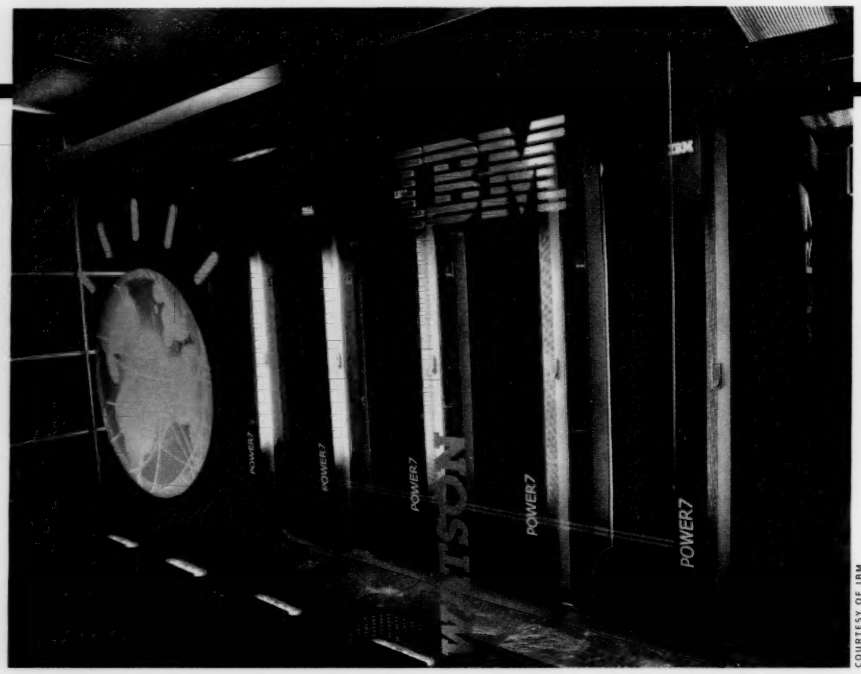

COURTESY OF IBM

SUPERCOMPUTERS

IBM's Watson Advises at Cancer Center

IBM'S WATSON supercomputer is about to begin evaluating cancer treatment options that can be delivered to physicians in a matter of seconds.

IBM and WellPoint — the Blue Cross and Blue Shield Association's largest health plan — are essentially turning Watson into an adviser for oncologists at Cedars-Sinai's Samuel Oschin Comprehensive Cancer Institute in Los Angeles.

Cedars-Sinai's historical data about cancer, as well as its current clinical records, will be ingested into a version of Watson that will reside at WellPoint's headquarters in Indianapolis. The computer will act as a repository of information about multiple types of cancer, according to IBM's Steve Gold, the worldwide marketing director for Watson.

WellPoint will work with Cedars-Sinai physicians to design and develop applications that will help doctors prescribe specific treatments for patients. Some of the applications will involve speech and imaging.

Last fall, WellPoint and IBM partnered to improve patient care through the use of evidence-based medicine, in which doctors follow proven best practices when they encounter patients with specific symptoms. One example is when a physician prescribes an aspirin regimen for someone who has suffered a heart attack.

This version of Watson is much smaller than the one that defeated two human champions on the TV show *Jeopardy!*, Gold said. The TV version was designed to respond to a question in three seconds. But for a doctor, he said, the speed of the response is much less important than the quality of the information.

– *Lucas Mearian*

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MOBILE & WIRELESS

USB 3.0 to Reach Smartphones, Tablets This Year

USB 3.0 ports will be found widely on smartphones and tablets within the next year or so, according to the USB standards-setting organization.

Smartphones and tablets will likely have a MicroUSB port based on USB 3.0 specifications to fit the small size of the devices, said Rahman Ismail, CTO of the USB Implementers Forum, at the Consumer Electronics Show earlier this month.

The ports will allow faster data transfer between mobile devices and hosts such as PCs, some of which already have USB 3.0 ports. Data transfer rates will hit around 100MB/sec., or roughly 800Mbps.

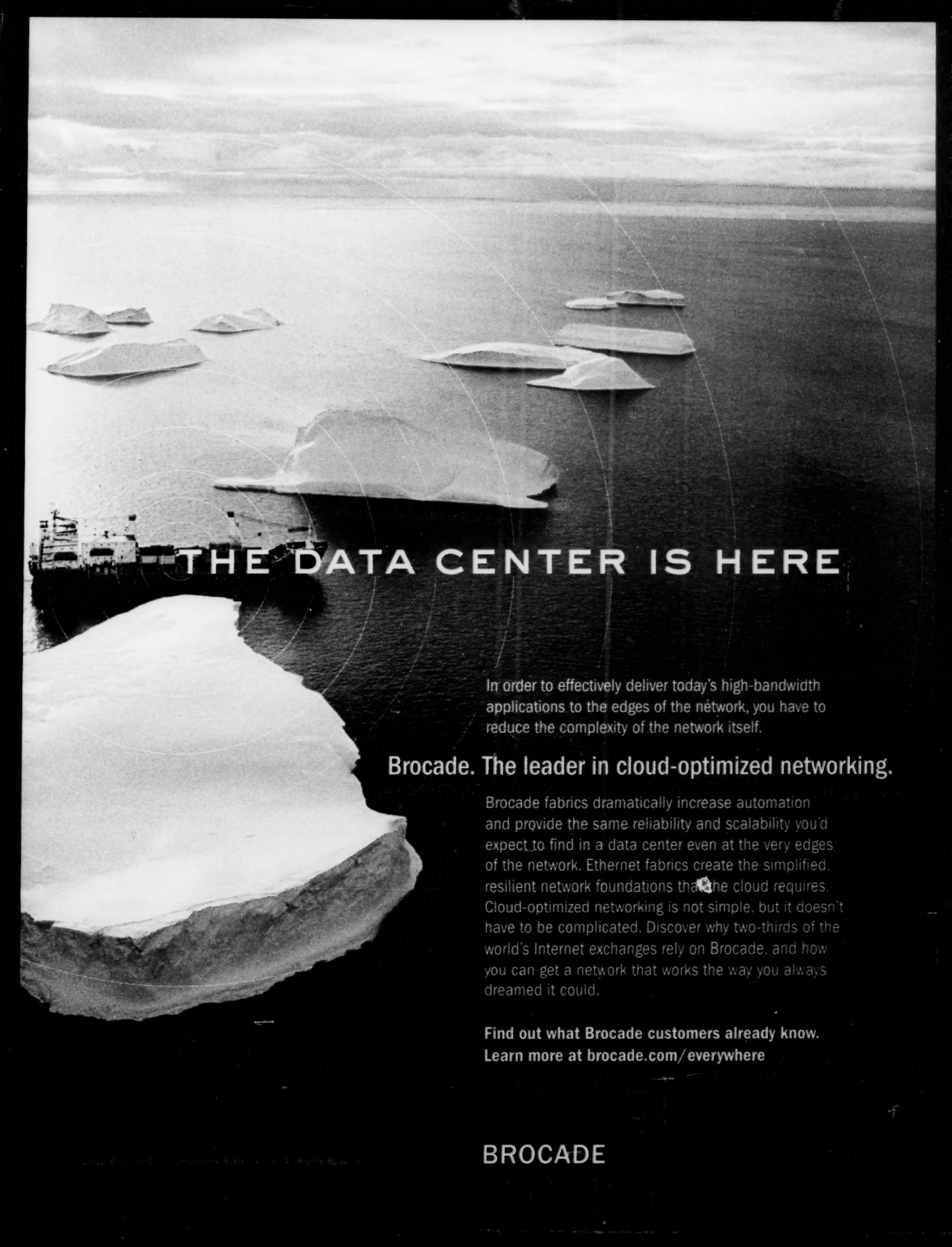
Mobile devices currently use USB 2.0 technology, which is slower. The new spec is backward-compatible with the older version.

A transfer that takes 15 minutes today will take roughly 1 minute and 15 seconds with USB 3.0, according to Ismail. But USB 3.0 isn't nearly as fast on mobile devices as it is on PCs, where its performance can reach 5Gbps. The higher speeds require more power than most mobile devices can muster.

"It's not the failure of USB per se; it's just that in tablets they are not looking to put the biggest, fastest things inside," Ismail said.

However, tablets and smartphones should recharge faster via USB 3.0 than via USB 2.0.

– AGAM SHAH, IDG NEWS SERVICE



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BETWEEN THE LINES
By John Klossner

OPERATING SYSTEMS

Upstart Mobile OS Tizen Previews Code

AN ALPHA RELEASE of the source code for the Tizen open-source operating system, aimed at giving Android and iOS a run for their money, is now available for download.

Backed by Intel, Samsung and other vendors, Tizen is a Linux-based platform. It includes an HTML5 application framework and a customizable user interface, in addition to the operating system. The interface, also called a "user experience," will be able to move among the different devices that Tizen supports.

The software is to be included in a variety of devices, from smartphones and tablets to smart TVs, netbooks and in-vehicle information systems. Intel said in September that it planned to back the project, after deciding to cut support for the MeeGo operating system.

Tizen's alpha release is targeted at smartphones and tablets, and it "runs on the PC emulator," according to the project's website. "We will have full source code for smartphones, tablets and additional device[s], with a reference user experience, available in the coming weeks and months," the site said.

The source code is, however, a "very early preview" and isn't meant to be used for designing production applications. Rather, the release is intended to help developers become familiar with the platform.

The Tizen project is hosted by the Linux Foundation and governed by a technical steering group. When Tizen was announced in September, backers said the first release would be available in the first quarter of this year, with Tizen-based devices expected in mid-2012.

A group called the Tizen Association was set up to guide development of the software platform; representatives of Intel, NTT DoCoMo and other companies are on its board of directors.

Intel hasn't abandoned Android. The vendor is working with Motorola on Android devices built with its Atom chips.

– John Ribeiro, IDG News Service

Micro Burst

Corporate spending on Macs and iPads is projected to rise

58%

to $19 million in 2012, suggesting that Apple has found a place in the enterprise.

E-VOTING

U.S. Finds Flaws In ES&S DS200 Voting Machine

A ballot-scanning device slated for use in the upcoming presidential elections misreads ballots, fails to log critical events and is prone to sudden lockups, the U.S. Election Assistance Commission found.

An EAC report on the Election Systems & Software (ES&S) DS200 Precinct Count Optical Scanner in the Unity 3.2.0.0 voting system cites multiple "substantial anomalies" in the DS200, including screen freezes, system lockups and shutdowns, and a failure to log all normal and abnormal system events.

For example, the 141-page Formal Investigative Report released late last month notes that the DS200 sometimes failed to log events, such as a vote being cast, when its touchscreen was calibrated or when the system was powered on or off.

Though the EAC concluded that the DS200 doesn't currently meet federal standards, it stopped short of decertifying the system.

Instead, the EAC issued a "notice of noncompliance," which gives ES&S an opportunity to remediate the problems.

In a statement, ES&S said it has worked in good faith with the EAC and contends that the flaws wouldn't compromise election results.

– JAIKUMAR VIJAYAN

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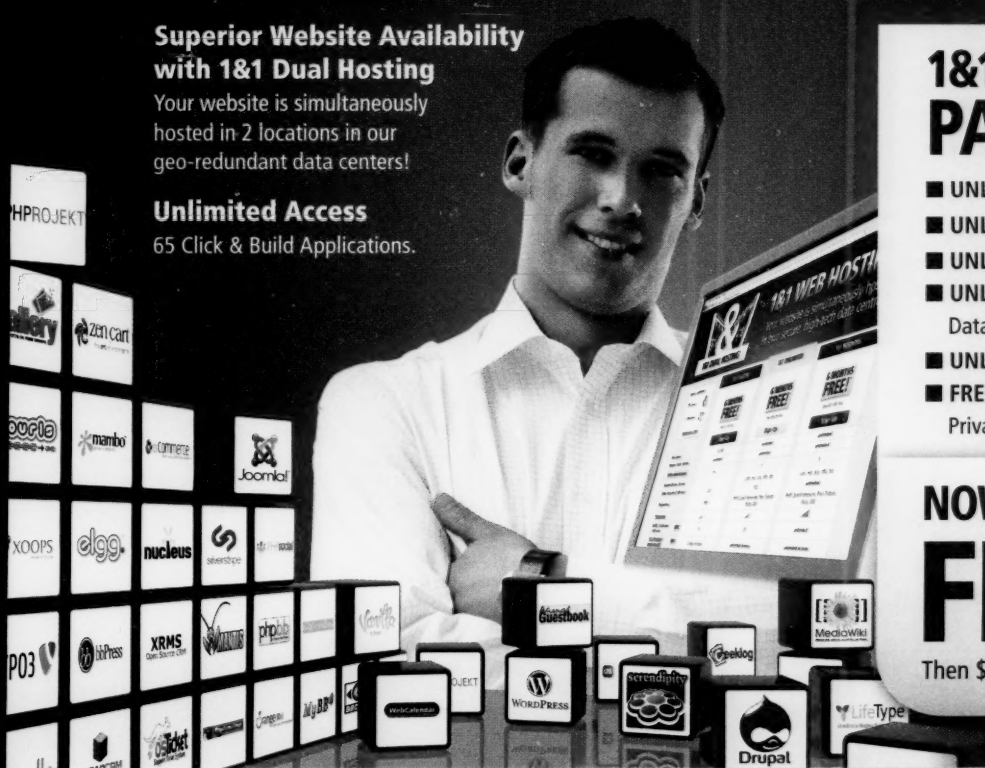

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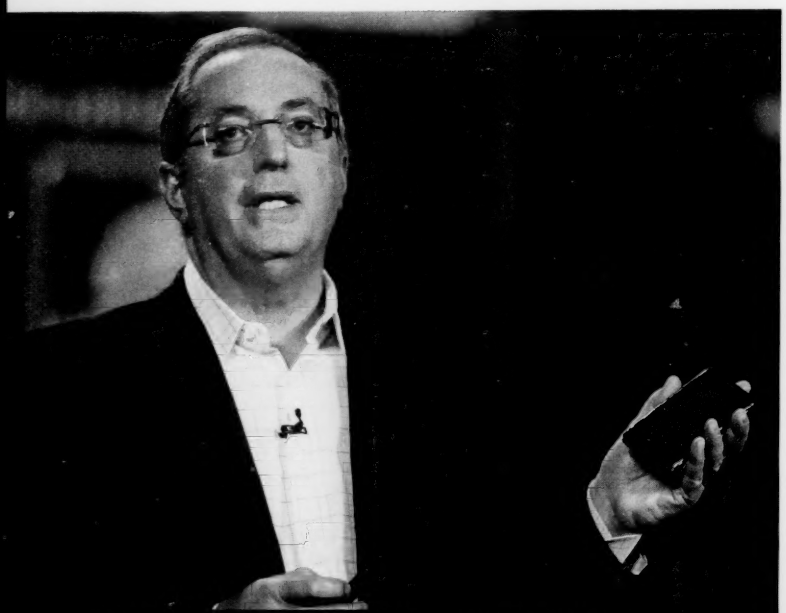

Intel CEO Paul Otellini holds an Intel-based smartphone as he delivers a keynote address at CES 2012.

Intel Launches New Push Into Mobile

The chip maker has partnered with Motorola and Lenovo in a new effort to get into the smartphone business. By Sharon Gaudin and Agam Shah

INTEL MOVED to defend its turf — and possibly its future — by inking deals to supply next-generation Atom chips to smartphone makers Motorola and Lenovo.

The agreements, announced this month at the Consumer Electronics Show in Las Vegas, mark Intel's latest effort to enter the burgeoning — and lucrative — smartphone market, where most devices currently feature chips designed by ARM Holdings.

Dan Olds, an analyst at Gabriel Consulting Group, said that while Intel still sells hundreds of million of chips a year, ARM partners like Nvidia, Samsung, Texas Instruments and Qualcomm are shipping billions of "increasingly sophisticated devices" that are built with ARM chips.

Under the agreements, Lenovo and Motorola will release smartphones based on Intel's upcoming Atom Z2460 chip, code-named Medfield, later this year, said Intel CEO Paul Otellini in a CES keynote speech.

Since Intel has been struggling to enter the smartphone market, "the deals with Lenovo, and especially Motorola, are a very positive step forward," said Patrick Moorhead, an analyst at Moor Insights and Strategy.

But to ensure success against a rival whose share of the smartphone processor market is close to 100%, the Intel-based phones will need application developers, carrier support and positive reviews from independent analysts, Moorhead added.

Intel has so far fallen flat in attempts to enter the smartphone business.

The vendor's first processors designed to run smartphones — the Moorestown chips that were unveiled in May 2011 — were considered power-hungry, which prompted LG to scrap plans for the first Intel-based smartphone.

Intel also partnered two years ago with Nokia to develop the Linux-based MeeGo operating system for smartphones, but the Finland-based handset maker abandoned the effort last February and instead adopted Microsoft's Windows Phone OS.

Mike Bell, vice president and general manager of Intel's mobile wireless group, said battery life for devices running the Atom Z2460 chip will be up to eight hours for 3G voice calls, up to six hours for high-definition video and up to five hours for 3G browsing, with a standby time of 14 hours.

The Z2460 will also be able to vary its performance based on the user's demands; it's designed to reduce power consumption when high performance isn't needed and deliver a burst when demand increases. Bell said that feature should be especially useful for tablets, which the Z2460 is also designed to run.

Analysts have said the Medfield chips should become more power-efficient as Intel advances its manufacturing technology. If so, Intel could pose a serious threat to ARM's dominance, they said.

The Z2460 chip is now made using the 32-nanometer process. Intel could build chips that are much more energy-efficient using the 22nm process it uses for laptop chips.

Rob Enderle, an analyst at Enderle Group, said Intel's deals with major IT industry companies like Motorola and Lenovo could indicate that the new Medfield chip can meet the evolving needs of smartphone users.

The Atom Z2460 "is competitive," said Enderle. "But when dealing with an entrenched market, you don't need to be just competitive — you have to be better enough to get the market to move." ◆

Shah *is a reporter for the IDG News Service.*

> [The Atom Z2460] is competitive. But when dealing with an entrenched market, you don't need to be just competitive – **you have to be better enough** to get the market to move.
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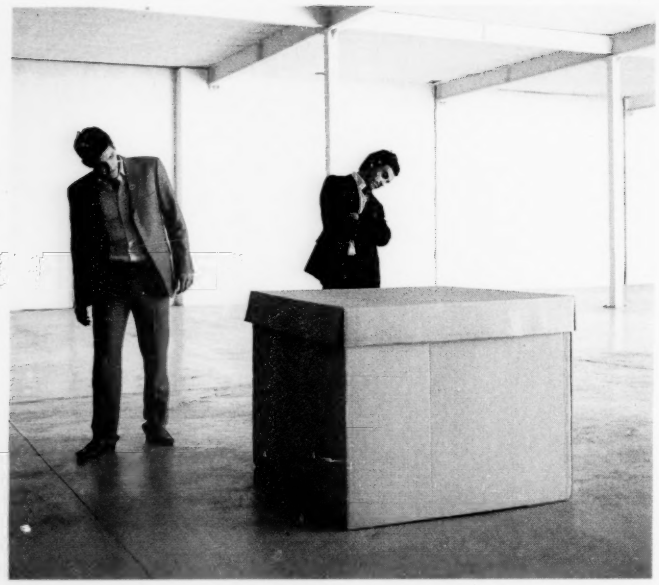

Oracle Move Could Push Rivals Toward Big Data Bundles

Analysts say Oracle's delivery of a Hadoop appliance could force IBM, HP and SAP to follow suit. By Jaikumar Vijayan and Joab Jackson

THE SHIPPING of Oracle's Big Data Appliance earlier this month could pressure major rivals like IBM, Hewlett-Packard and SAP to come up with Hadoop offerings that tightly bundle hardware, software and other tools, analysts say.

On the day the appliance shipped, Oracle announced that its new offering will run Cloudera's Apache Hadoop implementation and management software.

The tightly bundled Big Data Appliance includes Sun server hardware — 18 Linux-based x86 Sun servers with 216 processor cores, 864GB of working memory and 648TB of raw disk storage — along with an Oracle NoSQL database, an open-source distribution of R statistical software and a copy of Oracle's Java HotSpot Virtual Machine.

The appliance provides 40Gbps InfiniBand connectivity among the nodes, a rarity in Hadoop deployments, many of which use Ethernet to connect the nodes. Multiple racks can be tethered together in a cluster configuration, noted George Lumpkin, vice president of data warehousing product management at Oracle.

Lumpkin added that the company this month also started shipping Big Data Connector drivers for exchanging data between the Big Data Appliance and several other Oracle products, including Oracle Database 11g, the Exadata data warehousing and online transaction processing appliance and the new Exalytics business intelligence appliance.

Oracle unveiled the Big Data Appliance, along with the NoSQL database, at its OpenWorld user conference last fall.

David Menninger, an analyst with Ventana Research, said the offering will likely prompt IT managers to look more closely at bundled systems that could be "one-stop shops" for corporate data needs.

The Oracle system is designed to manage and analyze data sets, such as telemetry data, click-stream data or other log data, that are too large or are otherwise unsuitable for keeping in databases, Menninger said.

James Kobielus, an analyst at Forrester Research, said if IT managers do in fact take to the bundled Hadoop system, the other top tech vendors, many of which have already spent considerable sums on big data research and development, could be pushed to follow suit. "[Multiple bundled systems would be] good for the market. It gives customers a choice of commercially available products," he added.

Most enterprise Hadoop deployments have so far been custom built by internal IT engineers — companies had to buy the hardware, license the software and integrate it on their own, Kobielus noted.

Kobielus said the growing popularity of the open-source Apache Hadoop framework should in time help to further increase the number of packaged big data options available to IT managers.

Menninger said Oracle's unexpected decision to use the Cloudera implementation of Hadoop could prove beneficial to corporate users — and Oracle. When Oracle first announced the appliance, it was expected to run an Oracle distribution of Hadoop, he said.

The selection of an established implementation means that the vendor won't have to "fight to establish another distribution," Menninger added. "If Oracle had created its own distribution, it would have given the competitors a potential weakness to exploit." ◆

Jackson *is a reporter for the IDG News Service.* **Chris Kanaracus** *of the IDG News Service contributed to this story.*

[Multiple bundled systems would be] good for the market. It **gives customers a choice** of commercially available products.

ANALYST, FORRESTER RESEARCH

GETTY IMAGES

The Analytics Gap

Importance is Understood, but Enterprises Fall Short Putting Analytics to Work.

In today's increasingly competitive global environment, the need for solid analytics is crystal clear. After all, business leaders thoroughly understand the importance of embracing proven technologies that not only provide the organization with agility and flexibility, but also yield better decision support by optimizing access to and analysis of real-time data. This need is only intensifying as data points continue to climb.

This is confirmed in a recent survey by IDG Research Services, where at least seven out of 10 respondents said better planning and forecasting (77 percent), improving customer loyalty/retention (75 percent), and identifying cost drivers (71 percent) are very, if not critically, important business outcomes. Also, 68 percent of respondents report they rely heavily on analytics and reporting capabilities to improve planning and forecasting for their business.

Assessing the Environment

While IT leaders clearly understand the benefits associated with an analytics-based business environment, the survey also highlights a disconnect between understanding the importance and actual practice.

"People have no problem utilizing analytics on a small scale, but they are not sure how you go about doing it or what level of resource investment is required to make it a success on a large scale," says David Wiseman, director of business development with Sybase, an SAP Company and a leading provider of specialty analytic database solutions. "There are also concerns around whether or not the organization has the correct skillset, which is understandable since no one wants to sign up for something they are not sure they can deliver on. The third is the cultural implication upon the organization. Decision-making has a traditional or historical component, so saying that you are going to change can cause waves."

As with any opportunity, organizations face challenges when making an investment in this area. According to the research, cost as well as inadequate staffing and skills for big data analytics systems are the biggest hurdles for current analytics and reporting approaches. Budget restrictions also surfaced as a challenge.

Meeting Expectations

Regardless of the obstacles, the key to achieving anticipated results is to start with an architecture capable of meeting all of these needs and requirements vs. something that is specialized to meet each individual need. This is where a well-designed specialty analytics database excels, explains Wiseman.

"It will allow you to embed predictive modeling and analytics into the database vs. setting up a separate system. It will also allow you to bring in unstructured information including documents, text and Web information into one repository," he says. "You can have the best front-end system available, but without a dependable engine you won't go anywhere."

Bottom Line: Although a disconnect between understanding and reality exists today, there is hope. With a well-planned approach and a willingness to grow with support from proven leaders, an analytics-fuelled environment can become a reality in most any organization. "This can seem like a very complicated process using very advanced technologies," he says. "However, systems have evolved to a point where it is actually something manageable where all types of organizations across all industries can achieve success."

To learn more about proven best practices needed to close the gap, more research results as well as the benefits of pairing a well-designed, specialty analytic database with your frontend tools, download the whitepaper at **www.computerworld.com/sapsybase**.

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THE Grill

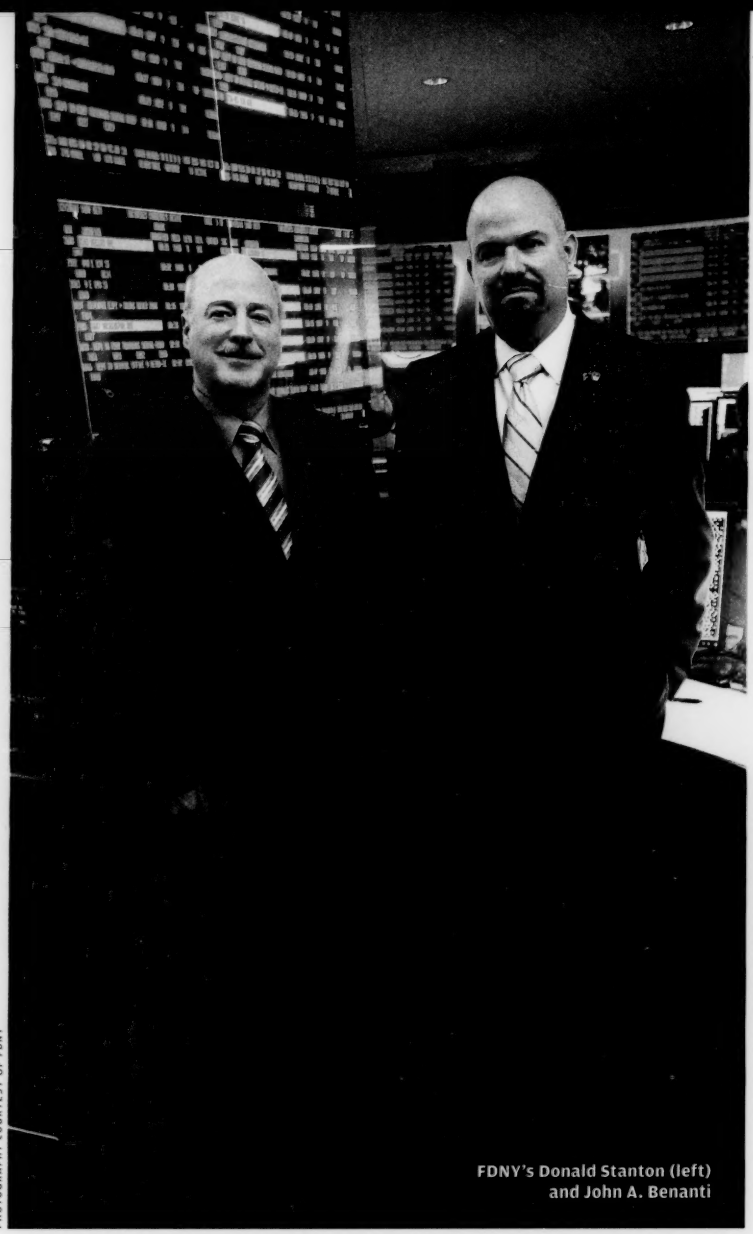
John A. Benanti and Donald Stanton

Technology's role in fighting fires and saving lives

How many years have you worked at FDNY? Benanti: Four, but I've worked for the city for 30. **Stanton:** 30, with 31 total working for the city.

What's your favorite technology? Benanti: I've been playing with the iPad lately, and I'm very happy with it. It's very, very easy to use, light, convenient. **Stanton:** I've always had an interest on the radio side, but some of the iPad stuff is neat.

Are you a native New Yorker? Benanti: I've spent all my life in Staten Island. **Stanton:** I'm from Queens.



PHOTOGRAPHY COURTESY OF FDNY

FDNY's Donald Stanton (left) and John A. Benanti

FIRE TRUCKS *remain the iconic image of any fire department, but firefighters — like all other workers — are relying on more technology than that to be effective on the job. Certainly, IT will never replace water hoses when it comes to dousing a blaze, but computers are increasingly being deployed on the scene, too. That's certainly the case at the New York City Fire Department (FDNY), one of the largest fire departments in the world. Here, Deputy Commissioner of Technology and Support Services John A. Benanti and Assistant Commissioner Donald Stanton talk about how technology fits into the operations at FDNY.*

Can you give me an overview of the technology FDNY uses? Benanti: There's an awful lot of technology here. We work on mainframe services. We support our CAD dispatch, data warehouses, well over 100 applications, Unix and Linux servers. We now have kiosks in our fire stations and EMS stations for firefighters to go online.

Continued on page 12

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> **We now can track patients from the [incident] site to when they get to the emergency room.**
>
> **DONALD STANTON,** ASSISTANT COMMISSIONER, NEW YORK CITY FIRE DEPARTMENT

Continued from page 10

Tell me about the Fire Department Operations Center (FDOC). Stanton: It's built out with IT and radio capabilities. Before 9/11, it was more of a notification center. But right now, we get video feeds into the center. We get helicopter feeds from NYPD. We have agreements with a number of news stations to supply their raw helicopter feeds. We have connections to the [Metropolitan Transportation Authority] and high-tech connections to Homeland Security.

Benanti: For example, [during the 2009 landing of a jet on the Hudson River], we were able to watch all the feeds and were monitoring operations from the FDOC.

Stanton: We have a lot of different people who could be involved in a rescue operation. We had people on the scene managing the incident, but we were able to, from here, look at the feeds and see how we were picking up people. People here might have been able to see something that you couldn't pick up on the scene. In a mass casualty incident, we now can track patients from the site to when they get to the emergency room.

What are the challenges of developing and deploying software for such a specialized workforce? Stanton: The main thing we want to do is get the end user involved, to make sure we have the requirements properly documented and then do extensive testing to make sure the application is working properly.

Benanti: For the most part, a need will be identified by the uniformed staff. They'll work with the technology people, who are almost all civilians, to best fit the need. We have a project management office that will map out what needs to be done, and we'll look at what technology is out there, and then we kind of match it up.

Tell me about the FDNY Geographic Information Systems Unit. Stanton: GIS is a very important part of our operations. It can give us the locations of various buildings, building plans, locations of hazardous materials, finding various infrastructure, such as fire hydrants. It can check hospital availability.

What about mobile technology? Benanti: We're piloting tablets. We use them with our electronic command board and patient tracking systems. We've got them out to a number of [fire] companies to test them. We're trying to evaluate how they're working.

Stanton: The firefighting environment is not like a standard user. The volume of water and smoke and how it's used, it has to be much more ruggedized, and we have to make sure it stands up before we roll it out.

How are tablets used in the field? Stanton: During the 9/11 incident, fire units were tracked on a manual board, and when the buildings came down, we lost that information. We can use the tablets to electronically track these units, and it's backhauled to the fire operations center.

What other key pieces of technology have you deployed that you consider particularly critical? Benanti: We're updating our field unit building inspections. We never had all our building information in one database, so we created a data warehouse solely for building inspection information. That's now all in that system along with information from other city agencies. In the past, when firefighters have done their inspections, they've been based on a schedule. But what we're getting to is coming up with a code and program to do inspections by risk. The data warehouse can shoot out what the biggest-risk buildings are. The higher-risk buildings will be looked at first. We're piloting this. We also developed an automatic vehicle location system. We put this technology into the [computer-aided dispatch] system, so when [callers] say where they are, there's software in the dispatch system that allows us to find the best route for the right ambulance to get to that location. And we just finished installing kiosks. They're basically PCs in the firehouse, a larger-screen PC. We had PCs for the officers, but now, by putting them in each of the kitchens, firefighters can get on and receive training.

What's the most promising upcoming technology for your field? Benanti: One thing we haven't been able to do is track a firefighter within a building. We have tracking technology but we're not able to track them [vertically]. The Z is the vertical coordinate, and that hasn't been developed yet. Once we get the Z coordinate, that's a huge piece for the fire department.

– *Interview by* Computerworld *contributing writer* **Mary K. Pratt** *(marykpratt@verizon.net)*

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THE NEW RULES FOR ENTERPRISE APPS

To be successful today, enterprise software must be more user-friendly, get updated more often, and offer users outside your company more transparency than ever before.

BY MINDA ZETLIN

AN INSURANCE COMPANY decided to roll out an application for its sales reps. The new app would give them a wider selection of products to offer customers when out in the field. Information on those products was stored in a legacy mainframe system, so the company created a Web interface that let reps query the database to get details on offerings.

The new interface did give access to product information, but it was neither intuitive nor easy to use. "There were long drop-down lists, and it was very form-oriented," says Alex Adamopoulos, CEO of Emergn, a consulting firm that worked with the

GETTY IMAGES / JOHN FOXX

insurance company. "There were many, many fields and pages and pages of content on each product. The salespeople were struggling to find the right types of data and there was no way to do an advanced search. There was also no way to do a what-if scenario — you'd have to do it offline with a spreadsheet-based application."

Around the same time, a second insurance company serving the same market also decided to launch an app for its field reps. This time, there was no legacy system to query, so the company started from scratch, licensing off-the-shelf software. "It was a database that came 60% or 70% baked," says Adamopoulos. "The rest was customizable and could be changed in response to user feedback."

The first company should beware of the second company and its more user-friendly app, he says. "The difference is customer experience, and it's going to be huge," he notes. "The licensed software will give salespeople the ability to quickly create a portfolio of products that's suited to the client. They'll be looking at the same types of data, but they'll be able to control it and shape it any way they need to." That might provide a serious competitive advantage, since the actual products the two companies offer are quite similar.

"We've done work with both companies," Adamopoulos says. "We keep telling the legacy one that they should look at creating a more user-friendly experience. They don't think it's necessary. They will a year from now, when they're losing market share."

"It used to be that you'd set up a server with databases and put nodes on a network. Users would have limited capability," says Joe Fuller, CIO of Dominion Enterprises, which creates both print and online publications that match buyers and sellers of real estate, used cars and other items. "The applications would all be proprietary and we would print operations manuals that were updated once a year. People would go to trainings to learn how to use the software, and they'd sit there with their manuals next to them. Today, you'd be wasting your time printing ink on paper, and your applications had better be user-friendly enough that people can figure them out."

It's a simple lesson, and one that IT departments everywhere need to absorb: The old rules for enterprise applications, both those built in-house and those licensed from vendors, don't work in today's environment.

Some IT leaders lament the consumerization of IT, in which employees arrive in the workplace bearing the mobile devices of their choice, with the expectation that they'll be able to use them to do their jobs. This means that whatever applications IT deploys need to run smoothly on a wide range of operating systems and screens, but the challenge doesn't end there. In addition to being platform-agnostic, today's enterprise apps must be as user-friendly and inviting as those found in a mobile app store in order to entice users who, increasingly, can choose whether or not to bother with them.

Here's a look at the new rule book.

Rule No. 1: Make It Appealing

It's a plug-and-play world, and no company wants to invest its money and employee time in lengthy or even brief software training. Even if your company does want to spend money on training, you may have a hard time getting people to show up. A recent survey by Swedish ERP vendor IFS revealed that many employees will simply bypass enterprise software they find user-unfriendly or not intuitive. Rather than take the time to learn how it works, they'll come up with elaborate workarounds involving Microsoft Excel or other consumer software.

And if your employees won't put up with an app that's not

Continued on page 18

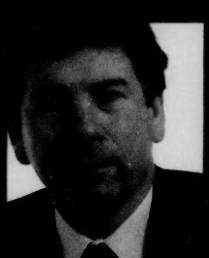
iPad App Improves Customer Service

CAN DEPLOYING a user-friendly enterprise application solve customer service problems? For British Airways, the answer appears to be yes. In August, the airline conducted a pilot test in which about 100 crew members were given iPads loaded with its new Enhanced Service Platform app. After a successful test, the airline is now distributing 2,000 iPads with the app to senior crew members across its route network.

The iPads and the app are intended to replace long scrolls of paper that list the passengers on board and provide information such as airline club status, ticket class and special dietary requirements, if any. The iPads, updated over a mobile network just before takeoff and after landing, give cabin crews a much more sophisticated tool.

"There's a lot more information about that passenger," says Mike Croucher, head of IT architecture and delivery at British Airways. "For instance, they may see that on a previous journey, the passenger was in first class, but the entertainment center didn't work. The crew member can see any correspondence we've had about that."

The iPad program was inspired by the desire to improve customer service. Over the past few years, relations between the airline and its cabin crews have been fraught with strikes and near-strikes, and the ill feelings were bleeding over into customer service, Croucher explains. To serve customers better, "we wanted to re-establish our engagement first with the cabin crew," he says.



Mike Croucher

British Airways uses the Agile software development methodology, so IT has been regularly releasing updates, typically once a month, since the app launched. IT solicits feedback from crew members and follows their suggestions for improvements. One such improvement now allows crews to tell if there are several employees from the same company on a flight, even if they aren't sitting together. "You often get a group of people where the managing director is in first class or business class with colleagues in economy," Croucher notes. In another improvement, seats with passengers who have been downgraded from first or business class due to overbooking are color-coded for quick identification.

"We're doing a lot of tuning around messaging, format and the colors on the screen," he adds. "It's a constant process of prioritization and enhancements. We're always evolving the application in many different directions."

— MINDA ZETLIN

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intuitive, just think how much harder it will be to get external users to adopt it. Because, like it or not, in today's world, your largest user base may well be outside your company. "Typically, in a business strategy for application development, you need to consider three user groups: B2B, B2E (employee) and B2C (consumer)," says Bill Clark, an analyst at Gartner.

He recalls going through the calculations with one insurer that was planning a mobile app. The company had 2,500 employees, and another 1,250 independent insurance agents using its network, he recalls. But then there were 3.5 million actual customers. Of those, about 5% had accessed the website from a mobile device. "That's 175,000 people!" Clark says. "In reality, more customers will touch a mobile website than every employee in the organization, and every employee in every business partner, combined."

With no way to force these outside users to accept your application, or even control what kind of device they use to access it, IT's only recourse is to create irresistible, user-friendly apps that work well on all commonly used browsers and mobile devices. "Everyone has the expectation that they'll have access to whatever application they need via whatever device they want to use," Fuller says. "Anywhere they can have a Web browser, they expect to get to the application and do what they need to, whether from a smartphone, tablet, netbook or notebook PC."

What does it take to create applications people love? Whether you're targeting internal or external users, design matters, experts agree. "There's a change in the skill sets we're using," notes Mike Croucher, head of IT architecture and delivery at British Airways. "We're using a lot more creative designers for the front end, people who think about color palette and user interface. There are more graphic designers and media people."

Indeed, when British Airways rolled out its new Enhanced Service app for the iPad, the company carefully selected an eye-catching design even though in-flight crew members would be the only ones to see it. "The front end has a very arty picture of the front of a cabin crew uniform and the tie," Croucher says. "Bringing that kind of visualization makes it look professional. Don't lose the opportunity to think about the artwork that goes into an app." (See "British Airways' iPad App Improves Customer Service," page 16.)

Everyone has the expectation that they'll have access to whatever application they need via whatever device they want to use.

JOE FULLER, CIO, DOMINION ENTERPRISES

Rule No. 2: Make It Transparent

As the insurance company with the legacy interface may soon learn, in today's business world, information is king, and the more information your employees can obtain quickly, the more competitive advantage you can gain. And that data has to be up-to-the-minute.

"People want more real-time data than ever before," says Jim Dusoe, owner of Net Data Design Innovations and a software developer with 30 years' experience. "They want to see where things are and what the process is. A lot of that has become doable over the last three years, where our processing is powerful enough to supply it. In the past, we might not have had a full batch process, but we could limit updates to once a day. Whereas now we're getting closer and closer to a state where when I touch something here, everyone else using the application sees it immediately."

Given the quantity of data that people need to absorb quickly these days, users especially like information presented in a graphic form, he adds. "Data visualization is a huge piece of this. Being able to create charts and graphs, and use some sort of database analytic tools to delve into the data, and discover trends that weren't visible before — there's a huge call for all of that in enterprise applications. That's probably the single biggest push I've seen recently," says Dusoe.

The need for more detailed and fresher information isn't limited to internal users. Customers and business partners increasingly expect deep insight into nearly everything your company does. "We build applications for customers, and those customers, the vice presidents in charge of software, want to know exactly where that supply chain is," notes Jonathan Rende, vice president and general manager at HP Application Transformation Products. "They want to know when things will be delivered, and if they're not going to be delivered, why not. They're looking for greater granularity in their view of the process."

Fulfilling those expectations isn't easy, he adds. "The complexity of providing that information is huge. We literally have to integrate our external user applications into many more data sources than we did before," says Rende.

Lest you think this trend is confined to the high-tech world, Adamopoulos reports seeing a shift across all industries. "Customers want control of the process. They don't want to be limited in what they're able to do, and some companies are opening up the kimono and saying, 'We'll make our apps as useful to you as they are internally to us.' " The reason, he says, is that companies that give customers maximum access gain advantage over more reticent competitors.

Admittedly, the thought of letting nonemployees delve deep into networks and databases will likely give the average IT executive a bad case of heartburn. Won't that create unacceptable security risks? And even regulatory violations in some cases?

Obviously, it makes no sense to give outsiders access that puts data and network security at unacceptable risk, Adamopoulos says. But at the same time, security and regulatory concerns should not become the reason for a blanket "no" to all outsider data access. "If you don't have what I call 'legacy thinking,' you start asking what it does make sense to make available to outsiders," he says. "Maybe HIPAA doesn't allow access to this part of the data, but what parts can you share?"

Besides, as Dusoe notes, even restricting all data to employees only is no guarantee of safety. "You could still have a disgruntled employee sitting at home taking screenshots."

For Dominion Enterprises, which collects vast amount of data on behalf of customers, the Apple model suggests a useful solution, Fuller says. That is, supply an API in a controlled environment, allowing customers to build the functionality they need. "Our customers are becoming more and more demanding about having visibility into their data," he says. "We're looking at creat-

Three Warning Signs Of an Unfriendly App

A USER-FRIENDLY INTERFACE is paramount if you want employees and external users to adopt an enterprise application. But what, precisely, makes an app user-friendly? That's a complicated science, with detailed books and research papers devoted to it. But if your app has any of the following three elements, that's probably not a good sign.

1. Too many places to make choices, especially on the same screen. "If you're ever working with a screen that has 40 input dialogs and drop-down menus and radio boxes, it's not really because you have to do 40 different things," says Brian Fino, managing director of Fino Consulting, which advises companies on IT investment. "If you're designing a simple, well-thought-out interface with just a couple of discrete controls, that's easier to use and also easier to test. So hopefully it will be a more stable app."

Brian Fino

2. Too many screens. "There are application development principles that really transcend the question of enterprise or consumer," says Gartner analyst Bill Clark. "One of them is the 'three-click rule.' Any time a population has to click on a link or traverse through to another screen, you lose about half of them, in terms of their paying attention or keeping the context of what they were doing in their heads. So after three clicks, you've lost most people."

3. Too much functionality. Consider the first two items in combination. If you can't bunch too much on one screen, and you can't have too many screens, then you're led to an inevitable conclusion: You just can't have too much stuff.

And that's a good approach, according to Mike Croucher, head of IT architecture and delivery at British Airways. "You can't make these things too complex," he says. "You've got to really think about the amount of data and options you can ask people to select in any one transaction. If you start taking people through too many transactions, they start losing the will to live. So you have to look at the value of each piece of information you put on the screen."

The solution, he says, is not to try to create an app that will solve all problems for all users. "Our applications tend to be delivered on the 80/20 rule. That is: Deliver something that does 80% or 90% of what you need well, and ignore the rest so that you don't overcomplicate it."

– MINDA ZETLIN

ing APIs so that not only can we build against them, but our customers can build against them too. If they want to do something with their data other than our prepackaged application, we'll give them that API. In the past, our customers didn't know what an API was — our industries are not particularly cutting-edge. But now customers are beginning to request and expect them."

Rule No. 3: Update It Often

There was a time when updates, upgrades or any sort of changes to the software used at work were met with a general groan. But that time is well behind us. These days, employees expect, and even want, frequent updates to the applications they use.

"That's been a really dramatic change in the industry," Fuller says. "Google's probably leading the way, with their incremental changes released nearly every week. You don't know when they're coming — you go to the interface and it's different. And more than 90% of the time, it's better."

He adds, "We used to use the waterfall method. We would create a specifications document, argue about it until it was etched in stone, and then the developers would work on it and release it." Now, he says, that way of working is "turned on its head." Instead, he and other experts favor an agile development approach, in which new application versions are routinely released every other week, with user input sought between releases. "We make incremental changes," he says. "And because the software is cloud-based, there's not the hassle of sending out disks. You've tested each version thoroughly, so you just push it out to users. And their expectation is that it's OK to have changes. The response is 'What does this do? Let's try that!' instead of 'Oh no, you changed my interface!' "

In fact, Croucher says, it's a good idea to experiment with different user interfaces, changing them frequently. British Airways even conducts an in-app form of A/B testing, in which some users are given one interface version, and other users are given another, to see which works better. "You need to get that segregation of back-end functionality and business services, which need to be correct, and front end, where you can be more experimental," he says.

That doesn't mean, however, that you should expect the back end to remain static. While you may not want to make changes on an every-two-weeks schedule, it's likely impossible to create truly user-friendly and appealing apps without overhauling the underlying functions and databases.

In British Airways' case, that meant changing the way fares were calculated, because the complex tangle of rules involving Saturday stay-overs and many other elements were nearly impossible for customers booking tickets online to understand. "It never made sense why some fares were more than others," Croucher says.

There was no way to do that by improving or changing the user interface alone. "We learned from our customers that you have to simplify the back end overall," he says. "If a process is too complex, you can't make a simple and user-friendly interface for it."

And if you can't make a simple and user-friendly interface, you're sunk. With mobile devices proliferating, screens in every direction, and more and more competition for mindshare, the time when you could count on anyone stopping to learn an application is over. As Fuller puts it, "You have to be aware that the user today has a very short attention span." ◆

Zetlin *is a technology writer and co-author of* The Geek Gap: Why Business and Technology Professionals Don't Understand Each Other and Why They Need Each Other to Survive. *Contact her at minda@geekgap.com.*

Hire a Vet? IT Says Yes

Highly skilled, highly disciplined and highly adaptive, veterans are showing their mettle on IT staffs nationwide. BY TRACY MAYOR

WHEN PRESIDENT OBAMA challenged the private sector last year to hire 100,000 unemployed veterans by the end of 2013, he shared the stage with companies that have some of the largest IT workforces in the United States — among them Hewlett-Packard, AT&T, Siemens, Honeywell, Accenture and Microsoft.

To address the disproportionately high rate of unemployment (12.1%) among veterans, the federal government now offers tax credits for companies that hire unemployed post-9/11 veterans or their spouses. In addition, the administration has established resources to help businesses identify and hire returning service people, and it provides vets with tools to translate their military experience into business skills that are more readily recognized by corporate America.

Given the IT-centric nature of many of the corporations that pledged to establish or expand their veteran-recruiting programs, it's fair to ask: Do the high-tech skills people learn in the military apply meaningfully to private-sector IT?

The answer, according to veterans and the companies that hire them, is an emphatic yes.

"The military is arguably one of the most high-tech organizations in the world," says Mike Brown, senior director of talent acquisition at Siemens. "If you're working on a ship or a plane or tank, you've got responsibility for large, complex, extremely expensive equipment

FOTOLIA / SIMON EBEL

run by highly sophisticated IT platforms and software."

Veterans return to the civilian world with a wide variety of skills, says Laura Rawlings, a former captain in the U.S. Army who now works in enterprise information security at healthcare giant Humana in Louisville, Ky. "The military trains for every field out there — including high tech," she says.

Here's her story and those of four other military veterans in IT.

Chris Norton

MILITARY EXPERIENCE: *Commissioned as a second lieutenant in the U.S. Army Reserve 1999-2009; mobilized for active service 2002-2004 (stateside, at Fort Dix) and again in 2008 (Iraq); holds the 88A (Transportation) and 90A (Multifunctional Logistics) Military Occupational Specialties; assigned to the First Mobilization Support Group at Fort Totten, N.Y.; holds the rank of major.*

CIVILIAN ROLE: *Senior strategist, social business, at AT&T, Morristown, N.J.*

When asked what qualities veterans have that might be of interest to corporate America, Chris Norton ticks off a list of 21st-century skills with rapid-fire delivery.

"Soldiers are given a very short window of time to master any piece of technology — be it analytics, communications, weapons — and put it to practical use under pressure," he says. "They're adept at working with minimal supervision; they're highly entrepreneurial; they're able to cope in a constantly changing landscape; they understand the global impact of their actions."

Norton has experienced re-entry into corporate life twice — both times at AT&T, where he has worked since 1999. (Currently he is the business lead supporting AT&T's B2B efforts in social media and digital care.)

It can take as long as six months to readjust to corporate life, he says. "In the military, you have a very clear objective — go take the hill by this or that time," Norton explains. "In most cases, you can't slip that deliverable without harm to life and limb. Compared to that, in the private sector, there's a different prioritization, or what might to a solider even feel like a lack of prioritization."

In fact, businesses would do well to adopt some of the military's ability to focus. "I would think it would be real attractive to employers to have someone on their team who can get away from ambiguity," Brown says.

Laura Rawlings

MILITARY EXPERIENCE: *U.S. Army, 2004-2007, captain. Began her career working on the Patriot missile system; later became an information systems manager for the Army's NIPRNet and SIPRNet (a.k.a. the Department of Defense's "nippernet" and "sippernet"); served in Texas, Georgia and Korea, among other locales.*

CIVILIAN ROLE: *Security consultant, enterprise information security, at Humana, Louisville, Ky.*

"Putting together my résumé was nerve-racking," says Humana's Laura Rawlings.

Everything Laura Rawlings knows about technology, she picked up in the Army. Rawlings, who studied biology and biochemistry in college, worked first in the Army on the Patriot missile system — "which is very high-tech; there are a lot of computer skills involved," she points out — and then leaped at an opportunity to specialize in network security.

She won early acceptance into the FA 53 officers' program, the military's version of information systems management. That was a big achievement, she says, because "usually they pick more senior people."

Unlike some other military positions, FA 53 incorporates computer-industry tech and security certifications from Microsoft, Cisco and the CISSP, among others, alongside its military requirements. That combination left Rawlings in good stead when she was discharged and was ready to start looking for civilian employment.

Still, she found the process of translating her skills into business-speak daunting. "Putting together my résumé was nerve-racking," she says. "I felt like I was bragging" — a common problem among ex-military personnel trained to credit

team accomplishments over individual achievements — "and it was difficult to exactly explain what I had done in the military."

Rawlings had expertise in networking, but the military networks she worked on have many more components than civilian systems. Among other things, they might incorporate technology called Blue Force Tracking, a GPS-based system for identifying forces in the field. "It was hard to make all these other devices I was working with sound applicable" in a civilian setting, Rawlings says.

But she succeeded, receiving an offer from Humana shortly after she separated from the Army. She is currently part of a team that provides security consulting services to business unit leaders. "When they have a business function that needs to happen, we make sure they achieve their goals securely," she explains.

Dennis Thoma

MILITARY EXPERIENCE: *U.S. Air Force, 1985-1998, noncommissioned officer. Specialized in electronics intelligence for the Air Force Space Command; served in Colorado, Nebraska, Spain and Italy.*

CIVILIAN ROLE: *IT manager (responsible for 18 project managers) at Progressive Casualty Insurance, Cleveland.*

As a veteran and as a manager who has veterans reporting to him, Dennis Thoma says military experience teaches two concepts that are key to IT: the need for strong security and the importance of solid project management.

Security in particular is in the military's DNA, Thoma points out. "When you start to look at securing networks, securing data, those times when you're transferring encrypted data, even Sarbanes-Oxley — a lot of that was new at one point to the civilian world and to IT."

In contrast, the military has been focusing on security for "a long time," he says. "They've understood hacking for years."

Thoma himself came out of the Air Force with significant experience in worldwide program management. He says that skill translates easily to companies that do business with the Department of Defense — but not as easily to mainstream corporate operations. For that reason, he picked up Project Management Professional (PMP) certification following his discharge, a move he recommends to veterans as a way of validating that their military skills will cross over to the civilian side.

Jimmy Lamz

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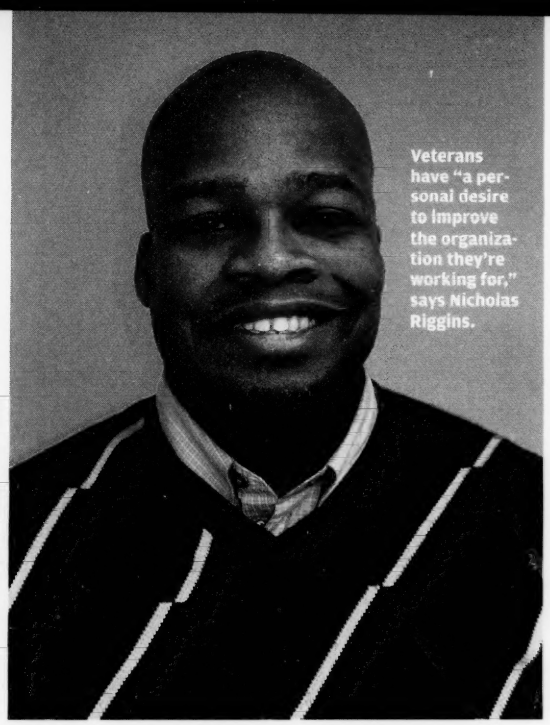

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» Progressive Insurance recruiting manager Connie Dingeman, who herself served in the U.S. Army for eight years, says leadership is a key asset. "We have hired a lot of ex-military into leadership roles where someone else might have been hired into a more entry-level position. And veterans are mission-oriented, which fits well with Progressive — we want that sense of clear goals and objectives."

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team accomplishments over individual achievements — "and it was difficult to exactly explain what I had done in the military."

Rawlings had expertise in networking, but the military networks she worked on have many more components than civilian systems. Among other things, they might incorporate technology called Blue Force Tracking, a GPS-based system for identifying forces in the field. "It was hard to make all these other devices I was working with sound applicable" in a civilian setting, Rawlings says.

But she succeeded, receiving an offer from Humana shortly after she separated from the Army. She is currently part of a team that provides security consulting services to business unit leaders. "When they have a business function that needs to happen, we make sure they achieve their goals securely," she explains.

Dennis Thoma

MILITARY EXPERIENCE: *U.S. Air Force, 1985-1998, noncommissioned officer. Specialized in electronics intelligence for the Air Force Space Command; served in Colorado, Nebraska, Spain and Italy.*

CIVILIAN ROLE: *IT manager (responsible for 18 project managers) at Progressive Casualty Insurance, Cleveland.*

As a veteran and as a manager who has veterans reporting to him, Dennis Thoma says military experience teaches two concepts that are key to IT: the need for strong security and the importance of solid project management.

Security in particular is in the military's DNA, Thoma points out. "When you start to look at securing networks, securing data, those times when you're transferring encrypted data, even Sarbanes-Oxley — a lot of that was new at one point to the civilian world and to IT."

In contrast, the military has been focusing on security for "a long time," he says. "They've understood hacking for years."

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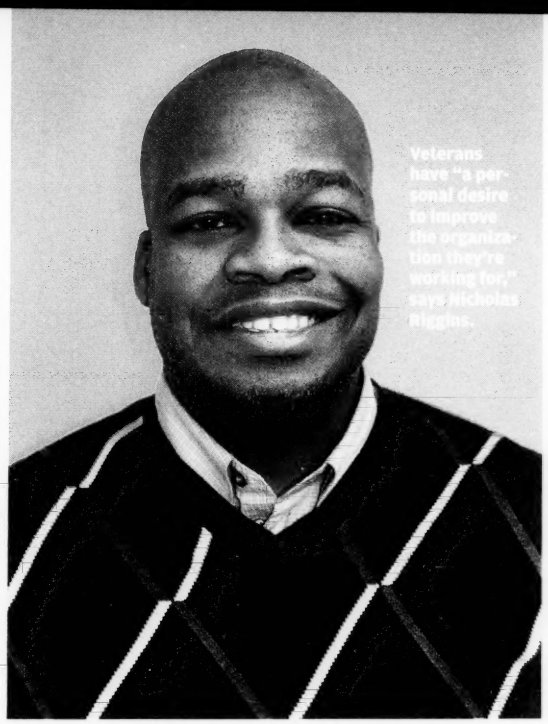

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Cyberumbrella

More companies are taking out **insurance policies** to protect against cybercrimes. Here's why IT's input is critical. **BY MARY K. PRATT**

IF YOUR COMPANY were hit with a cyberattack today, would it be able to foot the bill? The *entire* bill, including costs from regulatory fines, potential lawsuits, damage to your organizations' brand, and hardware and software repair, recovery and protection?

It's a question worth careful consideration, given that the price of cyberattacks is rising at an alarming rate. The second annual Cost of Cyber Crime study, released last August by the Ponemon Institute, reported that the median annualized cost of cybercrime for a company is $5.9 million — a 56% increase from the 2010 median figure.

A growing number of insurance companies are offering policies that provide protection in the event of data breaches and other malicious hacks. But they're having some difficulty making many sales — in part because the cost of premiums can be staggering.

Lawyers and information security leaders say many executives mistakenly believe that standard corporate insurance policies or general liability policies cover losses related to hacking, or that their cyberpolicies, if they have them, will cover all costs related to a breach. Most of the time, they won't.

A February 2011 paper by Forrester Research analyst Khalid Kark indicates that many companies are still trying to understand the basics of these policies, which are offered by such carriers as ACE USA, Chubb, The Hartford and St. Paul Travelers Cos. The most common questions revolve around what types of polices are out there, what they cover, how to select the right policy and whether such insurance is even needed.

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IT leaders are particularly likely to get confused, because tech execs have not traditionally made decisions about corporate insurance. Likewise, the risk management and legal teams that typically do make insurance decisions have not customarily sought out their IT counterparts for advice.

Yet, IT's input is crucial when it comes to deciding whether to purchase cyberinsurance and determining what coverage to buy, security experts say.

"The IT people and the risk people desperately need to get together to talk about risk in terms of information technology and the likelihood and outcomes of a breach," says Don Fergus, an IT risk consultant and 2012 chairman of the IT Security Council for the security professionals organization ASIS International.

What's Covered, What's Not

Some companies purchase standard insurance policies and think they're fully protected, not realizing that the policy might cover physical property but not intangibles. For example, a property insurance policy would cover the cost of a server smashed up by a disgruntled employee, but it wouldn't cover the company's liability for failing to perform a service for a client as a result of the server downtime.

Liability insurance generally offers protection from lawsuits or claims, but Fergus points out that general liability, errors and omissions, and directors and officers liability insurance policies will not cover claims arising from electronic data loss or lack of access to that data.

Ken Goldstein, vice president of Chubb Group of Insurance Cos. in Warren, N.J., explains that cyberinsurance falls into two general buckets. The first bucket covers costs associated with third-party liabilities — that is, claims from other organizations. And the second covers first-party expenses and losses — that is, damage to your own organization. Additionally, policies are available that cover other costs, such as third-party notification and PR expenses.

Of course, companies can purchase policies to address both first and third parties, so they're covered for a range of scenarios — from the cost of notifying customers whose data was breached, to the cost of hiring a forensic IT team, to even the cost of extortion and ransom demands, Goldstein says.

IT Pros as Insurance Experts?

Companies considering a policy need to determine exactly what coverage they need and whether it makes sense to pay the premiums associated with that coverage, says Eric J. Sinrod, a San Francisco-based partner at national law firm Duane Morris.

That's where IT comes in. An organization's risk management and legal folks understand the language of insurance riders and exclusions, but no one is better equipped to understand and articulate an organization's information security system than the people who run it. "The CIO is on the front lines in dealing with information systems and should know about actual and potential problems," says Sinrod.

Insurance companies will want to know what security exists at a company before they write any policy, and they might even require a third-party audit to verify what's in place, says Mark Lobel, a principal and security benchmarking expert at PricewaterhouseCoopers. Therefore, companies must ensure they follow the best information security practices for their industries, he says.

IT leaders should then determine potential threats, the likelihood that they will occur, and how such threats will impact the organization if they do happen. "You can't insure [correctly] if you don't understand the risks," Lobel explains.

Not all companies — or all IT departments — are comfortable with this level of self-scrutiny, points out ASIS International's Fergus. "There is a head-in-the-sand kind of view," he says. "IT people may know they're vulnerable, but they don't want to write it down."

Sticker Shock

Even companies that have done their due diligence can be in for a jolt, Fergus says. "They go out to the [insurance] carriers, and they get sticker shock." That's because cyberliability insurance can cost $7,000 to $40,000 per million dollars of loss. And with losses possibly totaling in the tens — or even hundreds — of millions, a policy that covers such costs can carry a staggering price tag.

Deciding how much coverage to buy can be tricky. Too little, and you don't cover your exposure. Too much, and you face the prospect of sky-high premiums. In Towers Watson's 2011 Risk and Finance Manager Survey, 61% of the responding companies that were carrying network liability policies said that they had bought $10 million to $49.9 million in coverage limits; only 8% had purchased policies with $50 million or more in coverage limits.

Some companies take a look at the cost of coverage and balk. Others worry about payouts, particularly in light of a few high-profile cases in which the insurer and the organization filing a claim wound up in court. Sony and the University of Utah were among the organizations involved in such cases.

Hord Tipton, executive director of the nonprofit International Information Systems Security Certification Consortium, says his organization doesn't carry cyberinsurance. Companies that do, he contends, may become lax. "A company should not let complacency set in just because they are insured," he warns.

More important, Tipton maintains, insurance couldn't help his organization recover the most valuable asset it could lose in a breach: its reputation.

Chubb's Goldstein counters that logic, saying companies might find that they can survive the hit to their reputation only to realize that the costs of repairing other damage will do them in. As he points out, "You'd hate to assume you'd be out of business because of reputational damage, only to find what sunk you wasn't the reputation but the cost of the liability." ◆

Pratt *is a* Computerworld *contributing writer in Waltham, Mass. Contact her at marykpratt@verizon.net.*

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DON FERGUS, IT RISK CONSULTANT

Security Manager's Journal

MATHIAS THURMAN

You Can't Secure Every Home

Unauthorized network access from home PCs has been widespread, and finding that out was just a fluke.

WE RECENTLY deployed RSA SecurID software authentication tokens to replace the hardware tokens we had been using to provide strong authentication for remote access via a VPN client. Hardware tokens are more secure for two-factor authentication in some ways (but not in every way, as you'll see), but the software tokens can be used on mobile devices such as phones; they are much less expensive; and they can be deployed more quickly and easily. What's more, when a user no longer needs access, it's much simpler to disable a software token than it is to retrieve a hardware token from somewhere like China, Russia or India.

Of course, RSA suffered a notorious security breach last year, but after I was briefed on the details, I felt comfortable moving forward.

Deployments such as this software token rollout can be interesting, because you have a chance to learn about some scary practices that had been going on without your knowledge.

For example, once employees got word that their hardware tokens will no longer be operational, some of them started asking for software tokens to be installed on their home PCs and Macs. Clearly, they had been taking advantage of the fact that the hardware tokens could be used with any computer. Our VPN client allows full network access, and that, combined with our lack of Network Admissions Control, meant that we were ending up with untold numbers of noncompany computers on our network. Naturally, I can't vouch for the integrity of any of those noncompany assets. Home PCs are often used by family members and other people, any of whom might install untrusted applications, click on things they shouldn't and end up infecting our internal production network.

the discussions about security! **computerworld.com/blogs/security**

I'm also concerned about protecting intellectual property, which is my responsibility. We are free to inspect the contents of any device we have issued to our employees, but we have no legal right to inspect any personal device, even if that device is connected to our network. In addition, laws are vague in some states and countries regarding our ability to monitor activity when an employee is using a personally owned device. If such an employee were to leave the company, our intellectual property could easily go with him.

For good measure, let's throw in the risk of license compliance issues.

> **Our help desk has been helping employees install the VPN client on their home PCs.**

Trouble Ticket

» **Issue:** When software tokens replaced hardware tokens for two-factor authentication, our manager discovered that a lot of noncompany computers had gained access to the corporate network.

» **Lesson:** Lay down the law on remote access, with no exceptions.

Help Desk Too Helpful

While employees might not be aware that they shouldn't be connecting to the network from their own PCs, our help desk personnel should know that, right? Truth is, they've been helping employees install the VPN client on their home PCs. As an experiment, I called the help desk with an urgent request for access from my home PC. They actually sent me the full VPN client and walked me through the installation on my computer. After that experience, I reviewed some help desk tickets and found that the techs had also assisted in the installation of the VPN client on PCs at public Internet kiosks and hotel lobbies.

These exception requests are being met with a stern response. If an employee needs to access our network from home or another remote location, then the company needs to issue that employee a laptop. In many cases, the employee already has a laptop and is just too lazy to take it home or prefers using a Mac. But until we deploy a more secure method of remote access, such as a virtual desktop environment or a sandboxed VPN, I will hold the line against these sorts of exceptions. ◆

This week's journal is written by a real security manager, ***"Mathias Thurman,"*** *whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com.*

PAUL GLEN

The 'Low Affect' Effect

Unlike us, nongeeks don't recognize hard work as an expression of enthusiasm.

IN MY EXPLORATION OF THE DIFFERENCES between technical and business people, nothing surprised me more than this: Business people tend to think that we don't care about anything. One of their biggest complaints is that we don't share their passion for the business. Whenever I hear this, I have an immediate, visceral reaction of outrage: "How could you possibly think I don't care about anything? I work like a dog to try to turn your visions into reality!"

But my recent work has given me a deeper understanding of how business people think, and I've noticed that the cues that tell them what someone cares about are completely different from ours.

As geeks, we can tell what someone cares about by looking at what they're working on and paying attention to. Anyone working like a dog must be enthusiastic about their project. Someone intensely focused on a particular piece of code probably cares about how well it works or how elegantly it's designed. Someone spending a lot of time with a piece of hardware is probably committed to squeezing every bit of performance out of that investment. Someone who spends a night scrubbing a requirements document is probably excited about the idea of solving the real business problem at hand.

But nongeeks don't recognize hard work as an expression of enthusiasm. If there are no verbal or emotional signs of excitement from us, they can't feel our shared commitment to a project. They want more than signs that we understand what they want. They want signs that tell them that we feel the same way at the same time about the same thing. It won't matter if you immediately immerse yourself in the project and spend hours doing research or coding. If you haven't given the business people anything that they interpret as commitment, they will not be able to sense that their passion resonates with you.

And for business people, a sense of shared enthusiasm is a prerequisite to collaboration. It's how they know that we are all on the same team and headed in the right direction. Without it, they don't trust us. And without trust, we have little hope of working together effectively.

Unfortunately, geeks as a group tend to present a rather low affect. We don't express our enthusiasm with the outward show that many business people would recognize, and to a certain extent, we're suspicious of those who are openly emotional at work. We prefer Spock-like commitment to Kirk-like gusto and hyperbole.

But if we want to collaborate with nongeeks, we've got to find a way to express our enthusiasm for what we're doing together.

That doesn't mean we have to pretend to be someone other than who we are; inauthenticity would undermine trust. But we do need to be able to express our enthusiasm in ways that nongeeks can recognize. Perhaps the easiest, most reliable approach is to use words. We can say things that explicitly point out our feelings. Here are a few examples:

"I can see that you are passionate about this, and I'm excited about it, too."

"I'm committed to meeting these objectives."

"I really believe that this is the best direction."

"I want to make this the best it can be."

"I'm eager to see this take shape."

These are things that they'll understand. We don't need to jump out of our seats, throw our arms in the air and shout hallelujah, but we do need to communicate to them that we are committed to the same things that they are and that we feel very strongly about our work. Expressing these feelings opens the door to mutual trust and collaboration. ◆

Paul Glen is the CEO of Leading Geeks, an education and consulting firm devoted to unlocking the value of technical people. You can contact him at info@leadinggeeks.com.

Career Watch

Q&A

Christine Jahnke

The president of **Positive Communications Media & Speaker Training** *and author of* The Well-Spoken Woman *says body language is important in public speaking and job interviews.*

Let's say I've prepared a presentation for a large group of colleagues. I've mastered the material and run it by a few people to make sure it's on the mark. I'm reminding myself of some old advice: Smile and make eye contact. What am I forgetting? Slouched posture can telegraph uncertainty or submissiveness. Take ownership of any room with the "champion stance." Whether speaking before staff members, at a board meeting or at an industry conference, you will look and sound better with good posture. A relaxed yet commanding posture helps you project confidence.

The champion stance is easy to do. Start by placing one foot in front of the other. Then, stand up straight with body weight resting on the back leg. Avoid positioning feet shoulder-width apart, which locks the knees in place. Next, drop your shoulders back and lift your chin slightly. Don't stick your chest out. The shoulder drop is the secret to carrying yourself like a world champion.

Things like making presentations and being interviewed for a job are stressful for many people. How can a person manage to incorporate your advice on physical presence without coming off as a stiff automaton? Nervous anxiety or self-doubt can trigger "speech mode." The telltale signs of speech mode are weak eye contact, a ramrod-straight body and a rapid speaking pace. Additionally, some presenters develop tunnel vision as they clamp down on the sides of the lectern. The only movement is limited to neck turns and eye darts. Presenters caught in the grip of speech mode are suffering physically and emotionally.

Upper body movement and hand gestures relax the body language, are interactive and convey enthusiasm. When standing before an audience, turn to face the individual you are talking to. Don't just turn your neck; rather, look at the person by turning from the waist. Use a hand gesture to hand off a thought. Gestures can underscore central points and are a great way to externalize excess energy or anxiety. Keep the gestures round and smooth. Avoid harsh karate-chop jerks or flipping the wrists.

– JAMIE ECKLE

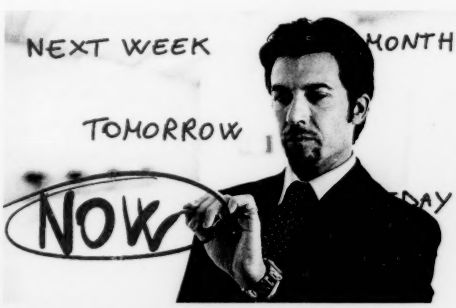
An Organization For Mobile App Developers

A new professional organization for mobile application developers, the **Application Developers Alliance**, was launched earlier this month and then promoted at the Consumer Electronics Show in Las Vegas. The ADA currently has a couple dozen corporate members, which are subsidizing the 600 or so independent developers who have signed up and currently pay no fees.

Jon Potter, former executive director of the Digital Media Association, is leading the new group. **He told *InfoWorld* that the alliance's key services include the following:**

- A collaboration network, via an online database.
- Product-testing facilities offering access to multiple platforms and tools.
- Discounted and free tutorials on trends and technologies, as well as structured training and certification programs.
- Discounted hosting and cloud services via Rackspace.

Lobbying for government policies to help developers is also expected to be part of the initiative. "There's developer interest in privacy [policies]," as well as in intellectual property policies pertaining to patents and copyrights, Potter said. The alliance will also address mobile broadband policy.

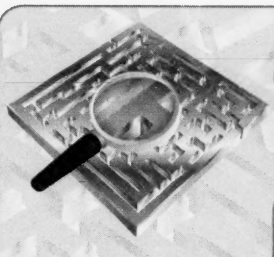


FOTOLIA / MINERVA STUDIO

Procrastinators Don't Get the Job

50% **The percentage of new hires** who had applied in the first week that a job was posted

SOURCE: STUDY BY INTERNET JOB-SEARCH ORGANIZER STARTWIRE OF OVER 6,000 HIRES IN 10 INDUSTRIES, FALL 2011



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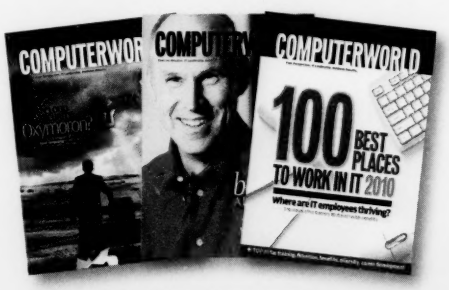

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HAL MAYFORTH

Guess He's Just Not a Key Employee

Pilot fish takes a job as a network support technician at a company that's *very* strict in its security policies. How strict? "They refused to give me access to the server room unless I expressly needed it," says fish. "After six months of working there, I had still not gotten a key. Then I was tasked with rewiring the whole building myself, so of course I was in and out of the server room dozens of times a day. Each time, I was required to have my boss open the door again because the door automatically locked. After about two days of this, I asked him, 'Wouldn't it be a lot easier to just give me access than to come open it every day?' He said that they were maintaining security by limiting the number of keys. When he came and opened the door once again, I asked, 'Can I just prop the door open with this box?' He said, 'Yes, that's fine,' so that's what I've been doing ever since – leaving the door open all day. I guess that's more secure than giving me a key."

Living in the Future

It's 1975, and this pilot fish and her husband work for a state university – fish in IT and her husband in the chemistry department. "To run jobs on the university mainframe, we each had access to a remote job entry (RJE) station in our respective buildings, across campus from each other," says fish. "One afternoon, we were both working on projects. I went to my RJE station to submit my last job of the day and saw a job pop up on the screen with my husband's name on it. Realizing that he was probably standing at his RJE station, I used the message command to send, 'Last run – be ready to go in half an hour.' He responded, 'Got a couple more hours – come on over.' The next day I was gently reprimanded by my manager for my use of university resources. He told me, 'You know, they don't build major data networks just so folks can send personal messages back and forth!' "

Bad Luck, Defined

This small company has 12 regional locations scattered around the U.S., and it's about to open another one. "Each location had to have a unique number in the company's central computer system," says a pilot fish in the two-man IT department. "This would make the next location number 13. The other IT guy was the one who got to put the new locations into the system. As he was working on it, he turned to me and asked, 'Should I make the new location 14, since 13 is bad luck?' And I said, 'Let me tell you what's bad luck – giving a computer an out-of-sequence number for a sequential numbering system.' He used 13."

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OPINION

SCOT FINNIE

Mobile Is Immediate

Communication habits are evolving from batch mode to near real-time.

AROUND THE WORLD, the rapidly expanding use of smartphones and tablets is turning into a transformational trend — for enterprises and consumers alike.

On the plus side, the rush to mobile is driving adoption of BYOD (bring your own device) policies, mobile-only communications, unified communications and powerful cloud-based services. But 2012 is also likely to be the year when mobile gets away from large enterprises. IT shops desperately need mobile management, internal app libraries and well-thought-out mobile security systems.

The mobile industry makes mobile management for enterprises difficult by bedeviling consumers with rampant device proliferation, frequent operating system upgrades, contract lock-ins and nearly nonexistent customer service. Enterprises have little choice but to let much of that mess through the door as they agree to BYOD policies.

"BYO is a principle that most organizations will adopt, and [they] must prepare for this change," said Gartner analyst Nick Jones. CIOs must prepare BYOD programs "sooner than they realize," he said. Of course, when you allow three or four mobile platforms and a never-ending stream of smartphone and tablet models, your management and security concerns multiply significantly. And the tide of smartphones keeps rising. Gartner predicts that sales of smartphones to end users will hit 645 million in 2012, up from 461 million in 2011.

What's driving adoption on such a large scale? For one thing, communication habits are evolving from batch mode to near real-time. And mobile is immediate. It's about communication *right now.* People carry smartphones everywhere and use them for everything. They often prefer their phones to larger devices that idle nearby. It's immediacy that's making smartphones dominant.

I think we can expect the smartphone to become the primary communication and computing device. Smartphone customers demand much higher service levels than cellphone subscribers. The successful mobile vendors are likely to be the customer-focused ones. And companies that focus on customers might want to consider these points:

Two-year contracts are not what customers want, and monthly charges are out of whack. My guesstimate is that the typical monthly charge for a smartphone with data and texting is $100 in the U.S., which leaves a lot of people out in the cold.

Handset makers should build one or two great smartphones a year instead of a boatload of confusing choices. Take a cue from Apple and stand up to the carriers that want phones built to their specs (wireless radios aside). Many smartphone manufacturers act almost like OEM providers to the carriers. Smartphones are also far too expensive. Manufacturers and carriers drive up the retail prices. It can cost more to replace a lost smartphone than it does to buy an iPad.

Platform providers should think through the contexts of the user experience very carefully. Tiny touch screens need well-conceived user interfaces. Virtual keyboards need to be more usable than they are. Extensive usability testing and user-focused development are the keys to success. And — Apple, take note — my-way-or-the-highway user experiences are not the future. There should be room for user preference and customization.

When you look at the fact that Microsoft, Apple and Google are competing head-to-head to build the best mobile operating systems, it's clear that mobile is a phenomenon. I'd call it the next big thing, but it's already here. ◆

Scot Finnie is *Computerworld*'s editor in chief. You can contact him at sfinnie@computerworld.com and follow him on Twitter (@ScotFinnie).

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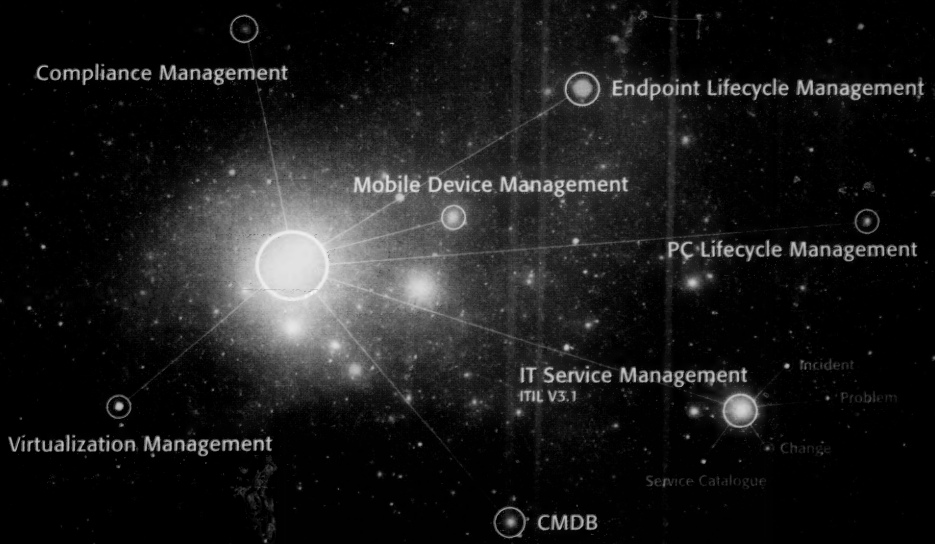

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